FY 2020 Bound Printed Matter Mail Processing Costs

I. PREFACE

A. Purpose and Content

USPS-FY20-22 develops mail processing costs for Bound Printed Matter. It contains electronic documentation of the spreadsheets and programs used to develop these costs.

B. Predecessor Documents

The most recent predecessor document was USPS-FY19-22 in Docket No. ACR2019.

C. Corresponding Non-Public Document

There is no corresponding non-public document.

D. Methodology

This analysis uses the same methodology as described in Docket No. R2006-1, USPS-LR-L-109. This methodology was used most recently in Docket No. ACR2019, USPS-FY19-22.

E. Input/Output

USPS-FY20-22 relies upon mail processing cost inputs as developed in USPS-FY20-26. It also relies upon the 2020 IOCS nonpublic data set in USPS-FY20-NP21 and replicates cost distribution and cost pool assignment methodology in USPS-FY20-7.

The mail processing costs for Bound Printed Matter are used in the parcel cost models in USPS-FY20-15.

II. ORGANIZATION

The main results are presented in two Microsoft Office Excel workbooks: FY20 BPM Costs ASF.xls and FY20 BPM Costs Op07.xls. These workbooks contribute Tables 1 and 2, below, respectively. Data sources are referenced in each spreadsheet in the Microsoft Office Excel workbooks. The programs and workbooks used to estimate these costs are described in the Program Documentation section below.

Table 1
Total Bound Printed Matter Mail Processing Costs by ASF/NonASF and Basic Function
Fiscal Year 2020 Volume Variable Costs ($000)
(Piggyback and Premium Pay Factors Applied)

		Non-ASF				ASF				Grand
Office	Cost Pool	Outgoing	Incoming	Transit	Other	Outgoing	Incoming	Transit	Other	Total
1 MODS	D/BCS	53	256	0	117	0	1	0	3	430
4 MODS	AFSM100	2,144	4,891	0	5,974	216	18	0	92	13,335
5 MODS	FSS	390	3,711	0	1,806	0	0	0	0	5,907
9 MODS	APBS BNDL	570	4,436	0	2,261	6	79	0	54	7,406
10 MODS	APBSPRIO	1,973	4,471	0	2,387	36	70	0	57	8,994
11 MODS	LCUS-SSM	544	614	0	507	8	12	0	17	1,701
12 MODS	1TRAYSRT	448	268	0	573	5	11	0	9	1,314
13 MODS	MANF	404	279	0	648	7	9	0	11	1,357
14 MODS	MANL	1	0	0	0	0	0	0	0	2
15 MODS	MANP	349	313	0	435	16	0	0	20	1,133
16 MODS	PRIORITY	564	2,208	0	1,061	17	12	0	23	3,886
17 MODS	LD15	91	648	0	0	0	0	0	0	739
18 MODS	1CANCEL	883	351	0	516	0	1	0	6	1,757
19 MODS	1DSPATCH	45	84	0	101	0	0	0	0	230
21 MODS	1MTRPREP	7	3	0	15	0	0	0	0	25
22 MODS	1OPBULK	1	25	0	18	0	0	0	0	45
23 MODS	1OPPREF	214	41	0	153	6	3	0	5	423
24 MODS	1OPTRANS	6	6	0	76	0	0	0	0	88
25 MODS	1PLATFRM	1,021	1,463	0	10,765	16	23	0	274	13,563
26 MODS	1POUCHNG	22	195	0	76	0	0	0	0	293
27 MODS	1PRESORT	12	9	0	23	1	0	0	1	45
28 MODS	1SACKS_H	35	203	0	152	0	0	0	0	390
29 MODS	1SCAN	296	12	0	122	11	1	0	4	445
31 MODS	BUSREPLY	12	5	0	246	0	0	0	2	265
32 MODS	EXPRESS	30	10	0	24	1	0	0	0	66
34 MODS	REGISTRY	0	1	0	50	0	0	0	0	51
35 MODS	REWRAP	0	4	0	572	0	0	0	5	581
36 MODS	1EEQMT	2	2	0	380	0	0	0	17	401
37 MODS	1MISC	13	187	0	152	3	0	0	8	364
38 MODS	1SUPPORT	7	11	0	68	1	0	0	4	91
52 MODS	INTL ISC	0	0	0	0	0	0	0	0	0
62 NDCs	ManP	60	673	0	504	0	0	0	0	1,236
63 NDCs	LCUS-SSM	68	82	0	786	0	0	0	0	936
65 NDCs	FSS-NDC	8	275	0	116	0	0	0	0	399
66 NDCs	OTH	134	490	0	1,545	0	0	0	0	2,169
67 NDCs	PLA	961	978	0	12,070	0	0	0	0	14,008
68 NDCs	PSM	1,474	4,240	0	10,841	0	0	0	0	16,555
69 NDCs	APB	486	1,149	0	1,636	0	0	0	0	3,271
71 NDCs	TraySort	121	150	0	677	0	0	0	0	948
72 Non-MODS	N_Allied	1,826	6,884	0	4,076	0	0	0	0	12,786
73 Non-MODS	N_Auto	484	365	0	146	0	0	0	0	995
74 Non-MODS	N_BulkAccp	418	0	0	0	0	0	0	0	418
75 Non-MODS	N_BusReply	0	0	0	18	0	0	0	0	18
76 Non-MODS	N_CFSCMU	0	0	0	1,541	0	0	0	0	1,541
77 Non-MODS	N_Express	1	1	0	5	0	0	0	0	7
78 Non-MODS	N_Man_F	261	4,465	0	63	0	0	0	0	4,789
79 Non-MODS	N_Man_L	263	619	0	313	0	0	0	0	1,195
80 Non-MODS	N_Man_P	1,408	37,768	0	638	0	0	0	0	39,815
81 Non-MODS	N_Misc	147	153	0	3,396	0	0	0	3	3,698
82 Non-MODS	N_Oth Acct	0	0	0	9	0	0	0	0	9
83 Non-MODS	N_PO Box	0	37	0	4,524	0	0	0	0	4,561
84 Non-MODS	N_Registry	0	0	0	3	0	0	0	0	3
	Total	18,255	83,036	0	72,182	351	240	0	617	174,681

Table 2
Total Bound Printed Matter Mail Processing Costs by Operation
Fiscal Year 2020 Volume Variable Costs ($000)
(Piggyback and Premium Pay Factors Applied)

Group	Pool	All Other	OP 07	Total
1 MODS	D/BCS	430	0	430
4 MODS	AFSM100	13,331	3	13,335
5 MODS	FSS	5,907	0	5,907
9 MODS	APBS BNDL	7,406	0	7,406
10 MODS	APBSPRIO	8,994	0	8,994
11 MODS	LCUS-SSM	1,701	0	1,701
12 MODS	1TRAYSRT	1,314	0	1,314
13 MODS	MANF	1,357	0	1,357
14 MODS	MANL	2	0	2
15 MODS	MANP	1,133	0	1,133
16 MODS	PRIORITY	3,886	0	3,886
17 MODS	LD15	739	0	739
18 MODS	1CANCEL	1,756	1	1,757
19 MODS	1DSPATCH	230	0	230
21 MODS	1MTRPREP	25	0	25
22 MODS	1OPBULK	45	0	45
23 MODS	1OPPREF	422	1	423
24 MODS	1OPTRANS	88	0	88
25 MODS	1PLATFRM			
25 MODS	Outgoing	1,036	1	1,037
25 MODS	Incoming	1,487	0	1,487
25 MODS	Transit	0	0	0
25 MODS	Other	11,039	0	11,039
25 MODS	Total Platform	13,562	1	13,563
26 MODS	1POUCHNG	293	0	293
27 MODS	1PRESORT	45	0	45
28 MODS	1SACKS_H	390	0	390
29 MODS	1SCAN	445	0	445
31 MODS	BUSREPLY	265	0	265
32 MODS	EXPRESS	66	0	66
34 MODS	REGISTRY	51	0	51
35 MODS	REWRAP	581	0	581
36 MODS	1EEQMT	401	0	401
37 MODS	1MISC	364	0	364
38 MODS	1SUPPORT	91	0	91
52 MODS	INTL ISC	0	0	0
62 NDCs	ManP	1,236	0	1,236
63 NDCs	LCUS-SSM	936	0	936
65 NDCs	FSS-NDC	399	0	399
66 NDCs	OTH	2,162	7	2,169
67 NDCs	Platform NDC			
67 NDCs	Outgoing	961	0	961
67 NDCs	Incoming	978	0	978
67 NDCs	Transit	0	0	0
67 NDCs	Other	12,064	6	12,070
67 NDCs	Total NDC Pltfrm	14,002	6	14,008
68 NDCs	PSM	16,555	0	16,555
69 NDCs	APB	3,271	0	3,271
71 NDCs	TraySort	948	0	948
72 Non-MODS	N_Allied			
72 Non-MODS	Outgoing	1,826	0	1,826
72 Non-MODS	Incoming	6,884	0	6,884
72 Non-MODS	Transit	0	0	0
72 Non-MODS	Other	4,076	0	4,076
72 Non-MODS	Total Allied	12,786	0	12,786
73 Non-MODS	N_Auto	995	0	995
74 Non-MODS	N_BulkAccp	0	418	418
75 Non-MODS	N_BusReply	18	0	18
76 Non-MODS	N_CFSCMU	1,541	0	1,541
77 Non-MODS	N_Express	7	0	7
78 Non-MODS	N_Man_F	4,789	0	4,789
79 Non-MODS	N_Man_L	1,195	0	1,195
80 Non-MODS	N_Man_P	39,815	0	39,815
81 Non-MODS	N_Misc	3,698	0	3,698
82 Non-MODS	N_Oth Acct	9	0	9
83 Non-MODS	N_PO Box	4,561	0	4,561
84 Non-MODS	N_Registry	3	0	3
	Total	174,244	437	174,681

III. PROGRAM DOCUMENTATION

A. Computer Hardware and Software

The FORTRAN programs are run on a HP ProLiant DL560 Gen 8 with four Intel Xeon E5-4650 (each with 8 cores @ 2.70GHz) microprocessors and 256 GB of RAM. The operating system on this computer is Red Hat Enterprise Linux Server release 7.9 (Maipo) with the kernel 3.10.0-1160.6.1.el7.x86_64. FORTRAN programs are compiled using GFORTRAN from GNU Compiler Collection (GCC) version 4.8.5, which can be downloaded from http://gcc.gnu.org/fortran . The manual processing spreadsheet work is performed on PCs running the Windows 10 (64-bit) operating system and using Microsoft Office Excel 2002 (64-bit) from Microsoft Office 365 (64-bit).

USPS-FY20-22 includes electronic versions of all relevant programs, maps, and data files. The compiler used to run the PC-based FORTRAN programs can be downloaded freely from http://gcc.gnu.org/wiki/GFortranBinaries. Download the Windows 64-bit version of GFORTRAN. To compile use the command line: x86_64-pc-mingw32-gfortran.exe –O2 –ffixed-line-length-132 –finit-local-zero –fbounds-check –o {executable name} {program name.f}. The PC-based FORTRAN programs should be run in the same order as the programs are described below.

B. Preparation of the IOCS Data

The following program extracts clerk and mail handler tallies from the 2020 IOCS data set and prepares the tallies for the volume-variable cost distribution for mail processing Bound Printed Matter (BPM) costs for clerks and mail handlers to basic function/ASF/operation category.

Program: **cadoc20_prc.f** – Separates the clerk and mail handler tallies from the entire 2020 IOCS data set, separates the tallies between mail processing and administrative/window service, and assigns a cost pool to each tally using the method described in USPS-FY20-7.

Input: **FY20 IOCS Data** – Text flat file version of the submitted SAS IOCS nonpublic data set (USPS-FY20-NP21)
iocs2020_np.h – Declaration of IOCS tally fields
mods_fins20.prn – List of MODS 1&2 finance numbers used to identify MODS 1&2 offices (USPS-FY20-7)
mods_fcn4_fy20.prn – Map of function 4 MODS operation codes which are assigned to Non-MODS cost pools
costpools20.prn – Map of mail processing cost pools

Output: **clk_mh_mp20.dat** – IOCS mail processing tallies
clk_mh_aw20.dat – IOCS administrative and window service tallies

C. Cost Estimates by Basic Function/ASF/Operation Category – Clerks and Mail Handlers, Mail Processing

The following FORTRAN programs replicate the function of the mail processing cost distribution SAS programs documented in USPS-FY20-7. These programs use the cost distribution methodology described in USPS-FY20-7 to estimate mail processing volume-variable costs by subclass, cost pool, shape, and basic function/ASF/operation category. Basic function/ASF/operation categories are combinations of the following groups: auxiliary service facilities (ASFs) versus non-ASFs, operation code 07 (mail acceptance) versus all other operations, and basic function. The results of these programs are exported into Microsoft Office Excel where the estimated costs are used as a distribution key to distribute FY20 CRA Cost Segment 3.1 BPM costs to subclass, shape, and basic function/ASF/operation category.

Program: **mpproc20_bpm.f** – Estimates mail processing costs by activity code, cost pool, and basic function/ASF/operation category

Input: **clk_mh_mp20.dat** – IOCS mail processing tallies
iocs2020_np.h – Declaration of IOCS tally fields
asf.fin.20.srt – Map of ASF finance numbers
activity20_cra_intl.prn – List of the direct and class specific mixed activity codes
mixclass.intl – List of class specific mixed mail activity codes
mxmail.intl.dat20 – Maps the direct activity codes to their respective class specific mixed mail activity codes
costpools20_ld15.prn – List of mail processing cost pools and cost pool dollars (USPS-FY20-7)

Output: **mp20prc_bpm.data** – Estimated mail processing costs by cost pool, activity code, and basic function/ASF/operation category

Program: **sumclass_bpm.f** – Rolls up the BPM mail processing volume-variable costs, estimated from the program mpproc20_bpm.f

Input: **mp20prc_bpm.data** – Estimated mail processing volume-variable costs by cost pool, activity code, and basic function/ASF/operation category
costpools20_ld15.prn – List of mail processing cost pool
activity20_cra_intl.prn – List of the direct and class specific mixed activity codes
classes_cra20.prn – List of CRA subclasses

Output: **mp20_prc_bpm.csv** – Estimated mail processing costs for Bound Printed Matter by cost pool and basic function/ASF/operation category

Workbook: **FY20 BPM PRC Costs.xls** – Estimated mail processing volume-variable costs for Bound Printed Matter by cost pool and basic function/ASF/operation category

Input: **mp20_prc_bpm.csv** – Output from the program sumclass_bpm.f
FY20 mail processing volume-variable costs – BPM volume-variable costs by shape for mail processing (USPS-FY20-26)

Workbook: **FY20 BPM Costs Op07.xls** – Summarizes clerk/mail handler mail processing costs by cost pool and operation 07 (platform acceptance) versus all other operations for BPM. Fiscal year piggyback factors and cost ratios are applied to generate BPM costs by cost pool and facility.

Input: **FY20 BPM Costs.xls** – Provides FY20 clerk/mail handler mail processing cost estimates by cost pool and basic function/ASF/operation category for BPM
FY20 Piggyback Factors, Cost Ratios, Volume Ratios, and Reconciliation Factors – USPS-FY20-26
FY20 BPM Cost Segment 3.1 Costs – USPS-FY20-2
FY20 Piggyback Factors by Cost Segment – USPS-FY20-24

Workbook: **FY20 BPM Costs ASF.xls** – Summarizes clerk/mail handler mail processing volume-variable costs by cost pool and auxiliary service facility (ASF) versus non-ASF facilities for BPM. Fiscal year piggyback factors and cost ratios are applied to generate BPM costs by cost pool and facility.

Input: **FY20 BPM Costs.xls** – Provides FY20 clerk/mail handler mail processing volume-variable cost estimates by cost pool and basic function/ASF/operation category for BPM
FY20 Piggyback Factors, Cost Ratios, and Reconciliation Factors – USPS-FY20-26
FY20 BPM Cost Segment 3.1 Costs – USPS-FY20-2
FY20 Piggyback Factors by Cost Segment – USPS-FY20-24